AMENDMENT TO THE CLAIMS

Please amend the claims as follows:

1. cancelled

2. (previously presented) The method of claim 11, wherein the electromagnetic radiation fluorescently emitted by the compound is in the ultraviolet-visible wavelength ranges.

3. cancelled

4. cancelled

5. (previously presented) The method of claim 11, wherein the step of detecting comprises quantifying the electromagnetic radiation fluorescently emitted by the compound.

6. cancelled

7. cancelled

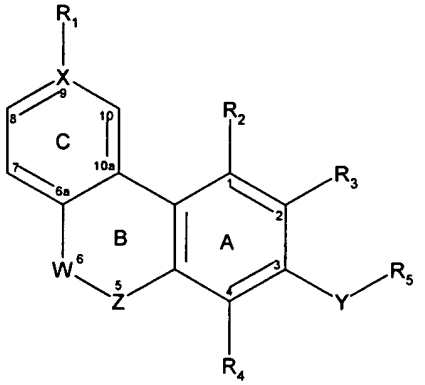
8. cancelled

9. cancelled

10. cancelled

11. (currently amended) A method of using a fluorescent cannabinoid compound as a fluorophore to generate a fluorescence emission signal comprising:

providing a cannabinoid compound having structural formula II below or a physiologically acceptable salt thereof, having an excitation range and an emission range ~~wherein the compound has an endogenous fluorescent property~~;



II

wherein:

W is C=O; Z is O; X is selected from C and CH; Y is selected from NH, N-alkyl, and N=N;

R_1 is any possible member selected from halogen, N_3, NCS, CN, NO_2, NQ_1Q_2, OQ_3, OAc, O-acyl, O-aroyl, NH-acyl, NH-aroyl, CHO, $C(halogen)_3$, $COOQ_3$, PO_3H_2, SO_3H, SO_3alkyl, $SO_2NQ_1Q_2$, $CONQ_1Q_2$, alkyl and alkyl substituted in any possible position with at least one substituent group,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_2 is selected from OH, OCH_3, OPO_3H_2, OSO_3H, OQ_3, O-COalkyl, O-COalkyl-T_1, O-CO-T_1, O-alkyl-T_1 and O-T_1,

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl;

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, a heterocyclic ring, an aromatic ring, a heteroaromatic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, a heterocyclic ring and a heteroaromatic ring;

exciting the cannabinoid compound with electromagnetic radiation having a wavelength at or around the excitation range; and

detecting the electromagnetic radiation fluorescently emitted by the cannabinoid compound at a wavelength at or around the emission range.

12. cancelled

13. (previously presented) The method of claim 11 wherein R_1 is any possible member selected from halogen, OH, an alkyl group having 1 to about 5 carbon atoms and an alkyl group having 1 to about 5 carbon atoms and substituted in any possible position with at least one member selected from OH, CHO, COOH, C(halogen)$_3$, N_3, NCS, CN, PO_3H_2, SO_3H and SO_3alkyl.

14. (previously presented) The method of claim 11 wherein R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring having 4 to 6 ring members and a heterocyclic ring having 4 to 6 ring members and 1,3 di-heteroatoms

each heteroatom independently selected from O, S and N,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms, and

T_4 is selected from alkyl, a heterocyclic ring and a heteroaromatic ring.

15. (previously presented) The method of claim 11 wherein:

X is C;

R_1 is selected from methyl, OH , CH_2OH, halogen and C(halogen)$_3$;

R_2 is selected from OH, OCH_3, OPO_3H_2, OSO_3H, OQ_3, O-COalkyl, O-COalkyl-T_1, O-CO-T_1, O-alkyl-T_1 and O-T_1,

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, alkylamino, di-alkylamino, a heterocyclic ring and a heteroaromatic ring.

16. (previously presented) The method of claim 11 wherein:

X is C;

R_1 is selected from methyl, OH and CH_2OH;

R_2 is selected from OH, OCH_3, OPO_3H_2, OSO_3H, OQ_3, O-COalkyl, O-COalkyl-T_1, O-CO-T_1, O-alkyl-T_1 and O-T_1,

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from an alkyl, a carbocyclic ring having 4 to 6 ring members and a heterocyclic ring having 4 to 6 ring members and 1,3 di-heteroatoms each heteroatom independently selected from O, S and N,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, alkylamino, d-alkylamino, NH, a bicyclic ring, a tricyclic terpine, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3 and adamantan-2-ylidenemethyl-T_3,

T_2 is selected from, in any possible position, a substituent group and $-CO-T_4$,

T_3 is an alkyl group having from 0 to about 9 carbon atoms, and

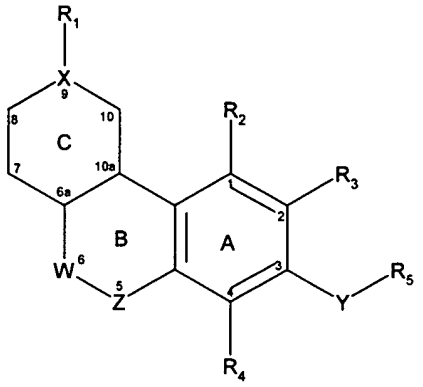
T_4 is selected from alkyl, $C(halogen)_3$ aminoalkyl, di-aminoalkyl, NH2, a heterocyclic ring and a heteroaromatic ring.

17. cancelled

18. cancelled

19. cancelled

20. (previously presented) A test kit comprising a cannabimimetic compound having an endogenous fluorescent property and the structural formula



wherein:

Y is selected from NH, N-alkyl, and N=N

Z is O; X is selected from C and CH; and

W is C=O and the C ring is aromatic;

R_1 is any possible member selected from halogen, N_3, NCS, CN, NO_2, NQ_1Q_2, OQ_3, OAc, O-acyl, O-aroyl, NH-acyl, NH-aroyl, CHO, C(halogen)$_3$, $COOQ_3$, PO_3H_2, SO_3H, SO_3alkyl, $SO_2NQ_1Q_2$, $CONQ_1Q_2$, alkyl and alkyl substituted in any possible position with at least one substituent group,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_2 is selected from OH, OCH_3, OPO_3H_2, OSO_3H, OQ_3, O-COalkyl, O-COalkyl-T_1, O-CO-T_1, O-alkyl-T_1 and O-T_1,

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl;

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from -D_1-D_2-T_2 and -D_2-T_2,

D_1, if present, is selected from alkyl, a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, a heterocyclic ring, an aromatic ring, a heteroaromatic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, ~~or~~ adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, a heterocyclic ring and a heteroaromatic ring.

21. cancelled

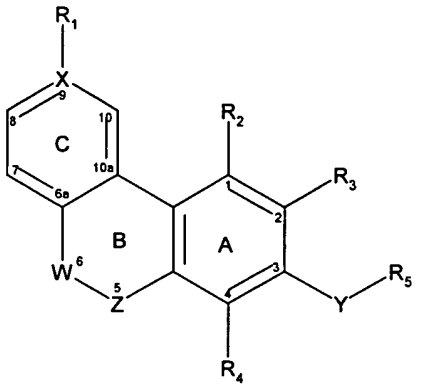
22. cancelled

23. cancelled

24. cancelled

25. cancelled

26. (previously presented) A compound of formula II, and physiologically acceptable salts thereof,



II

wherein:

W is C=O;

X is selected from C and CH;

Y is selected from NH, N-alkyl and N=N;

Z is O;

R_1 is any possible member selected from halogen, N_3, NCS, CN, NO_2, NQ_1Q_2, OQ_3, OAc, O-acyl, O-aroyl, NH-acyl, NH-aroyl, CHO, $C(halogen)_3$, $COOQ_3$, PO_3H_2, SO_3H, SO_3alkyl, $SO_2NQ_1Q_2$, $CONQ_1Q_2$, alkyl and alkyl substituted in any possible position with at least one substituent group,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_2 is selected from ~~H,~~ OH, OCH_3, OPO_3H_2, OSO_3H, OQ_3, O-COalkyl, O-COalkyl-T_1, O-CO-T_1, O-alkyl-T_1 and O-T1,

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and C1 to C4 alkyl;

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, a heterocyclic ring, an aromatic ring, a heteroaromatic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, a heterocyclic ring and a heteroaromatic ring

but if W is C=O and Y is O then R_5 is not CH2COOH or CH2COOEt.

27. cancelled

28. (previously presented) The compound of claim 26 wherein R_1 is any possible member selected from halogen, C(halogen)$_3$, alkyl amino, di-alkylamino, NH_2, OH, an alkyl group having 1 to about 5 carbon atoms and an alkyl group having 1 to about 5 carbon atoms and substituted in any possible position with at least one member selected from OH, CHO, COOH, C(halogen)$_3$, N_3, NCS, CN, PO_3H_2, SO_3H and SO_3alkyl.

29. (previously presented) The compound of claim 26 wherein R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring having 4 to 6 ring

members and a heterocyclic ring having 4 to 6 ring members and 1,3 di-heteroatoms each heteroatom independently selected from O, S and N,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic terpine, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms, and

T_4 is selected from alkyl, a heterocyclic ring and a heteroaromatic ring.

30. (previously presented) The compound of claim 26 wherein:

X is C;

R_1 is selected from methyl, OH, CH_2OH, halogen and C(halogen)$_3$;

R_2 is selected from OH, OCH_3, OPO_3H_2, OSO_3H, OQ_3, O-COalkyl, O-COalkyl-T_1, O-CO-T_1, O-alkyl-T_1 and O-T_1,

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring, a heterocyclic ring, alkylamino and NH,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, a bicyclic ring, a tricyclic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3, adamantan-2-ylidenemethyl-T_3, alkylamino, di-alkylamino and NH,

T_2 is selected from, in any possible position, a substituent group and -CO-T_4,

T_3 is an alkyl group having from 0 to about 9 carbon atoms,

T_4 is selected from H, C(halogen)$_3$, OH, NH_2, NO_2, alkyl, alkoxy, alkylamino, di-alkylamino, a heterocyclic ring and a heteroaromatic ring.

31. (previously presented) The compound of claim 26 wherein:

X is C;

R_1 is selected from methyl, OH and CH_2OH;

R_2 is selected from OH, OCH_3, OPO_3H_2, OSO_3H, OQ_3, O-COalkyl, O-COalkyl-T_1, O-CO-T_1, O-alkyl-T_1 and O-T_1,

T_1 is in any possible position and is selected from PO_3H, SO_3H, an alkyl group containing from 1 to about 16 carbon atoms, tetrahydropyrrole, morpholine, thiomorpholine, piperazine, a heterocyclic ring and NQ_1Q_2,

T_1 is optionally substituted in any possible position with at least one member selected from a substituent group, OPO_3H_2, OSO_3H, PO_3H_2, a heterocyclic ring and a heteroaromatic ring,

Q_3 is selected from H, alkyl, alcohol and alkyl-NQ_1Q_2;

R_3 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members;

R_4 is selected from H, OH, halogen, C(halogen)$_3$, CN, N_3, NCS, NQ_1Q_2 and an alkyl group having 1 to about 4 carbon atoms,

Q_1 and Q_2 are each independently selected from H and alkyl, or

Q_1 and Q_2 together comprise part of a heterocyclic ring having about 4 to about 7 ring members and optionally one additional heteroatom selected from O, N and S, or

Q_1 and Q_2 together comprise part of an imide ring having about 5 to about 6 members; and

R_5 is selected from $-D_1-D_2-T_2$ and $-D_2-T_2$,

D_1, if present, is selected from alkyl, a carbocyclic ring having 4 to 6 ring members and a heterocyclic ring having 4 to 6 ring members and 1,3 di-heteroatoms each heteroatom independently selected from O, S and N,

D_2 is selected from an alkyl group having from one to about sixteen carbon atoms, alkylamino, di-alkylamino, NH, a bicyclic ring, a tricyclic ring, 1-adamantyl-T_3, 2-adamantyl-T_3, adamantan-1-ylmethyl-T_3 and adamantan-2-ylidenemethyl-T_3,

T_2 is selected from, in any possible position, a substituent group and $-CO-T_4$,

T_3 is an alkyl group having from 0 to about 9 carbon atoms, and

T_4 is selected from alkyl, C(halogen)$_3$ aminoalkyl, di-aminoalkyl, NH2, a heterocyclic ring and a heteroaromatic ring.

Claims 32-40. cancelled

41. cancelled

42. (currently amended) A pharmaceutical composition comprising a therapeutically effective amount of at least one compound ~~from~~ of claim 26 or a physiologically acceptable salt thereof.

43. cancelled

44. (currently amended) A method of ~~stimulating~~ modulating at least one of the CB1

and CB2 cannabinoid receptors in an individual or animal comprising administering to the individual or animal a therapeutically effective amount of at least one compound ~~from~~ of claim 26 or a physiologically acceptable salt thereof.